

EPILEPSY AND EPILEPTIFORM SEIZURES. — Dr. J. Hughlings Jackson, in a recent paper on the Diagnosis of Epilepsy, *British Med. Journal*, January 11, gives as follows the principal clinical distinctions between epileptiform seizures and epilepsy:

Partly in order to show that I do not advocate the absolute separation of clinical from scientific investigation, but only the temporary separation, I will consider several broad differences and resemblances betwixt the two divisions of cases from a scientific as well as an empirical stand-point.

a. *As to affection of consciousness.*—The distinction is not that consciousness is lost in one and not lost in the other, but that consciousness is lost at first, or very soon, in the paroxysm of epilepsy proper, and late, or not at all, in the epileptiform seizures.

To say that an epileptic paroxysm begins with loss of consciousness, is equivalent to saying that the epileptic discharge begins in some part of the highest of the cerebral centres. This is an irresistible inference, be those highest centres where they may.

b. *As to spasm or convulsion.*—Convulsion begins more nearly bilaterally in the former; is more nearly universal at once, is more rapid, and is soon over. In the latter, it begins very locally on one side—hand, side of face, or foot—and becomes universal more gradually, the spasm being comparatively slow, especially at the outset.

c. *As to seat of changes.*—The latter depends on disease in some part of Hitzig and Ferrier's region; the former—this is hypothetical—on disease in some part in front of that region, or behind Ferrier's sensory region; that is, on disease in some part of what I suggest are the only, I think, middle motor and middle sensory cerebral centres; the parts in front of the middle motor centres being the highest motor centres; those behind the middle sensory centres, the highest sensory centres.

The vague term, "disease," or "changes," has to be analyzed. The term, "disease," is frequently used without regard to the distinction betwixt the two things, physiological abnormality (d), and abnormality of nutrition (pathology) (e).

d. *As to abnormal physiological condition of centres.*—In each, of necessity, there is increased instability of cells, since there occasionally occur excessive liberations of energy; in each there is a "discharging lesion." There is, then, no essential difference in the abnormal physiological condition in cases in the two divisions; yet the paroxysms of epilepsy proper are more "intense" (more spasm in a short time) than those of epileptiform seizures; and this possibly depends in part on the fact that the highest centres have most small cells. (Compare b.)

e. *As to pathology.*—In each there is increased nutrition; the excessive liberation of energy in the paroxysm of necessity implies increased taking in of nutrient substances having potential energy; increased nutrition is the other side of high instability. We have, as yet, little more than this very general, but inevitable, inference as to pathology in either. How the increased nutrition is brought about, we do not know in most cases; in some cases (see f), it is determined by tumor.

f. *As to morbid anatomy.*—We can say that the former is rarely caused by

gross organic disease; the latter are often so caused, syphilitic gross disease in particular. Sometimes, however, in cerebral tumor there are attacks difficult to distinguish from the epileptic vertigo of epilepsy proper.

Of course, the gross organic disease only "causes" the seizures in the sense that it leads to high instability of cells in its neighborhood; it acts like a foreign body. The probability is that it leads to the hyper-physiological condition of instability (see *d*), by producing a sub-inflammatory change, and thus increased nutrition (see *e*). This difference as to morbid anatomy in the two seizures, can only mean, of course, either that gross organic disease most often occurs in some particular places, or that in some particular places it more easily leads to instability of nerve cells.

Several of the foregoing are, to a great extent, but detached statements from different stand-points of what Bright and Wilks long ago asserted, viz., that epileptic or epileptiform attacks, without loss of consciousness, point to gross organic disease, such as tumor of the brain.

As implied, however (*a* and *c*), the essential difference betwixt the two kinds of seizures is chiefly as to the degree of evolution of the centre, part of which has become unstable.

This leads me on to say that several of the above statements (*a*, *c*, *d*) as to difference in the two seizures, are implied in the following highly interesting generalization by Herpin: "*En résumé: plus le début est long moins la crise est violente; plus, il est instantané, plus, l'accès est intense.*"

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ACUTE LUNG DISORDERS FOLLOWING HEMIPLEGIA.—The following abstract by Erlenmeyer of a memoir by Rosenbach, of Breslau (*Berliner klin. Wochenschrift*, 1878, No. 41), is taken from the *Centralblatt f. Nervenhilfkunde*, 1878, No. 12:

"The author deems himself justified, on the basis of a relatively large series of observations—eleven cases—in concluding that acute lung affections, occurring just after unilateral paralysis from cerebral hemorrhage, always occupy the paralyzed side. He alludes to the well-known experiments of Brown-Sequard and Schiff, in which, after certain definite injuries to the brain, hyperæmia and hemorrhages of the lung of the opposite side were observed; and he furthermore mentions briefly—too briefly, indeed—the confirmatory fact that in many cases of hemiplegia the respiratory muscles of the paralyzed side are either weakened or altogether involved, and put out of action (Hasse, for example, in his text-book, II Ed., page 426, speaks of cases in which the respiratory movements of the paralyzed side are carried on altogether and alone by the diaphragm. The memoir of Berger on the paralysis of the long thoracic nerve, may be quoted here; he found paralysis of the levator anguli scapuli and trapezius on the paralyzed side of a hemiplegic patient *Ref.*) and seeks the explanation of the phenomenon in question in a diminished reflex irritability of the air-passages of the paralyzed side, which he considers analogous to the unilateral reflex inhibition of the external auditory passage, the nasal mucous membranes, the cornea, the cremaster, the abdominal superficies, and the musculature of the nipple. The supposition of such a reflex inhibition in the air passages is certainly allowable, and draws considerable support from the mechanism